

TAXONOMIC ADJUSTMENTS IN *BOUCHEA* AND *LIPPIA*
(VERBENACEAE) OF MÉXICO

Guy L. Nesom

Department of Botany, University of Texas, Austin, Texas 78713 U.S.A.

ABSTRACT

New nomenclatural combinations are proposed for the following taxa of Verbenaceae occurring in México: *Bouchea longiflora* (Mold.) Nesom and *Lippia carterae* (Mold.) Nesom. The distribution of *B. longiflora* and its closest relative, *B. spathulata* Torrey, are mapped.

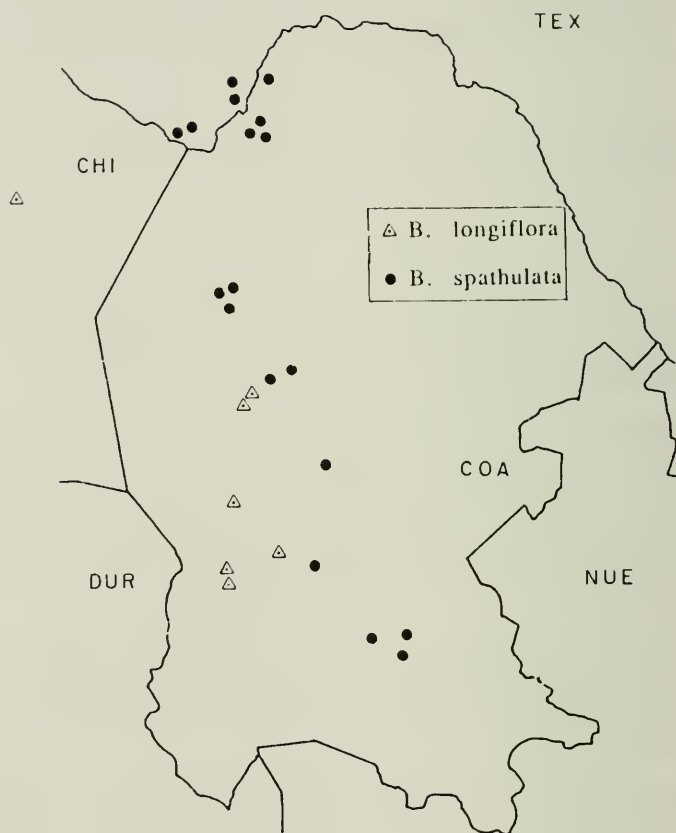
KEY WORDS: Verbenaceae, *Bouchea*, *Lippia*, México

Curation of LL,TEX collections of Mexican Verbenaceae has revealed that several taxa should be accorded a higher rank. The rationale with necessary nomenclatural combinations are provided below. Other comments on taxonomy of the family, primarily on the occurrence of numerous synonyms, will be forthcoming as part of a "Checklist of Verbenaceae in México" (Nesom, ms.).

1. *Bouchea longiflora* (Mold.) Nesom, *comb. et stat. nov.* BASIONYM: *Bouchea spathulata* Torrey var. *longiflora* Mold., Phytologia 23:210. 1972. TYPE: MÉXICO. Coahuila: Sierra de la Fragua, 1-3 Sep 1941, J.M. Johnston 8724 (HOLOTYPE: TEX!).

Bouchea longiflora (Mold.) Nesom clearly is closely related to *B. spathulata* Torrey, but the former differs in its much longer calyces (14-17 mm vs. 10-12 mm) and corolla tubes (30-45 mm vs. 15-25 mm). Although each taxon displays some variability in these features, there is no specimen that could be interpreted as morphologically intermediate. The two species probably are reproductively isolated by the marked difference in corolla length, which suggests a corresponding difference in pollinators. They also appear to be completely separated in geographical distribution, although their ranges very closely approach each other at several points (Map 1).

Bouchea longiflora is the only species in the genus with such a distinctly elongated corolla tube, and it is probable that it has arisen as an evolutionary derivative of *B. spathulata*, particularly in view of the strong similarity in



Map 1. Distribution of *Bouchea longiflora* and *B. spathulata*. All data points are from LL, TEX specimens, except for three localities in Texas for *B. spathulata* added from Moldenke (1940). Abbreviations are for Texas (TEX) and the Mexican states Coahuila (COA), Chihuahua (CHI), Durango (DUR), and Nuevo León (NUE).

other morphological features between these two species. Both species flower from about April to November and both occur in essentially the same type of habitats of matorral or chaparral at the same elevations (ca. 1200-1900 meters), although *B. spathulata*, with more collections available, has been recorded at somewhat higher and lower sites.

2. *Lippia carterae* (Mold.) Nesom, *comb. nov.* BASIONYM: *Lippia alba* (Mill.) N.E. Britt. var. *carterae* Mold., *Phytologia* 7:430. 1961. TYPE: MÉXICO. Baja California Sur: Sierra de la Giganta, dry rocky bed of Arroyo Santo Domingo, Rancho El Horno (northeast of San Xavier), 17 Mar 1960, A. Carter & R. Ferris 3864 (HOLOTYPE: UC; Isotype: TEX!).

Lippia alba (Mill.) N.E. Britt. is a widespread and somewhat variable species, but the plants regarded here as *L. carterae* (Mold.) Nesom are clearly outside the bounds of variation of any population of *L. alba*. Most prominently, while the pubescence of *L. alba* is strigose, composed of stiff, relatively thick based hairs, *L. carterae* produces a dense, close tomentum of fine, white, crinkled hairs on the stems, leaves, and floral bracts. The leaf surfaces have an understory of fine tomentum, with much longer, straight, stiffer, "alba-like" hairs intermixed on the upper surface and along the veins of the lower surface. Further, the corollas of *L. carterae* are distinctly yellow, as noted by Moldenke in the original description, in contrast to the white to pink or purplish corollas of *L. alba*. *Lippia carterae* is endemic to Baja California Sur although Wiggins (1980) treated it as *L. alba*. The latter is a common species from southern Texas through México and into Central America; it is known from the southwestern Mexican states of Sinaloa, Nayarit, Jalisco. and Colima, but over its whole range it apparently grows in much more humid habitats than does *L. carterae*. There are no records of the occurrence of *L. alba* in Baja California.

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